Course Proposals for Chemistry Program Revisions

Additional signatures as appropriate:

(include title)

UWUCC Co-Chairs

**Part II. 1. New syllabus of record.**

**I. Catalog Description**

Course Title: Intermediate Inorganic Chemistry (1c-3l-2sh)
Prefix: CHEM
Number: 214
Hours: 1c-3l-2sh
Prerequisites: CHEM 112 or 114
Description: The course will present the characteristic reactions and compounds of elements from across the periodic table. For the main-group elements, both discrete molecular compounds and non-molecular materials will be discussed. For the alkali, transition and inner-transition metals, the focus will be on non-molecular species such as ionic compounds, ceramics, superconductors and other inorganic-based materials. The solid-state structure of inorganic-based materials will also be presented. Laboratory activities will be used to reinforce concepts presented in lecture, and to stimulate interest through discovery-based exercises

II. **Objectives:** Upon successful completion of this course, the student will:

1) know trends inherent in the arrangement of the elements on the periodic table as a basis for understanding the descriptive chemistry of the elements
2) know the characteristic properties and reactions of the main group elements

4) be able to identify the basic structural motifs in the solid state.

1) Periodic Trends (1 hour)
2) Compounds and reactions involving the elements of: (6 hours)
   a) Groups 1 and 2: The alkali and alkaline earth metals
   b) Group 13: Boron, aluminum, and beyond
   c) Group 14: Carbon, silicon, tin, and lead

**VIII. Special Resource Requirements:**

1) Safety goggles
2) Laboratory notebook

**IX. Bibliography:**

1) *Descriptive Inorganic Chemistry, Third Edition,* Geoff Rayner-Canham and Tina Overton, W. H. Freeman: New York (2002)

2) *Descriptive Inorganic, Coordination and Solid State Chemistry,* G.E. Rodgers, 2nd ed

## Course Analysis Questionnaire

A1. How does this course fit into the programs of the department? For what students is the course

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C2 What other resources will be needed to teach this course and how adequate are the current

Present departmental resources are adequate to teach this course.